

10/618,111
February 24th, 2005
Reply to Office Action of 01/26/05

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Remarks

This amendment is in response to the January 26th, 2005 Office Action. Filed herewith and incorporated to this amendment is a 132 affidavit from the first named inventor James D. Smith. Smith is also the first named inventor on the '984 reference cited. Support of the above amendments can be found, for example, in paragraph 25 of the specification. Applicant respectfully traverses Examiner's rejections of claims 1-19 in light of the above amendments and the following remarks:

Rejection of claims 1-9 and 11-19 under § 103(a)

The examiner rejected claims 1-9 and 11-19 as being unpatentable over Smith '984 in view of Cook '183. One of ordinary skill in the art would not have used Cook in combination with Smith to produce high thermal conductivity resin of the present invention. First, one of ordinary skill in the art would not expect that the LCT resin of Smith could be used for enhanced thermal conductivity. Smith demonstrates enhanced electrical resistivity in the resins of the Smith '984 patent, and it is well known that enhanced electrical resistivity also gives diminished thermal conductivity, i.e. improved electrical insulation also gives improved thermal insulation. The above amendments incorporate the this thermal conductivity into all pending claims.

Further, one of ordinary skill in the art would not have used liquid crystal thermoset resins in conjunction with Cook. The LCT resins have a much more intricate molecular structure than the resins used in Cook. To add the large molecules of alumoxanes, in such high concentrations, to the crystalline structure of the LCT resins, one would expect the crystalline structure to be ruined.

Therefore one of ordinary skill in the art would not expect the LCT resins of Smith '984 to lead to resins with improved thermal conductivity, and further, one of ordinary skill in the art would not use Cook '183 to try and enhance the resins of Smith. When applying an obviousness rejection, there must be a reasonable expectation of success without the benefit of impermissible hindsight. *Hodosh v. Block Drug Co., Inc.*, 786 F. 2d 1136, 1143 (Fed. Cir. 1986); MPEP § 2141. Here there is no reasonable

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expectation of success when combining Cook '183 and Smith '984. The use of an LCT resin with Cook '183 by one of ordinary skill in the art would not produce resins that maintain the >1.2 kV dielectric strength of the present invention.

Rejection of claim 10 under § 103(a)

The examiner rejected claim 10 under '984, '183 and Stackhouse '740. Since claim 10 is a dependant claim, Applicant believes that the above amendments and remarks pertain to the rejection of claim 10 in a responsive manner.

In view of the above amendments, remarks and appended affidavit, applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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